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SUMMARY

of the

REPORT ON THE IN-DEPTH REVIEW OF THE NATIONAL COMMUNICATION

of

ICELAND

(The full text of the report (in English only) is contained in document FCCC/IDR.1/ICE)

Review team:

Naigzy Gebremedhin, Eritrea
Jaan-Mati Punning, Estonia
Clare Breidenich, United States of America
Peer Stiansen, UNFCCC secretariat, Coordinator

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Summary[1]

1. The in-depth review was carried out during the period September to December 1996, and included a country visit by the team from 9 to 12 September 1996. The team included experts from Eritrea, Estonia and the United States of America. Iceland ratified the Convention on 16 June 1993, and the national communication was due on 21 September 1994. It was only received by the secretariat on 4 March 1996. Additional background material was made available to the team.

2. Iceland's economy is heavily dependent on fishing but some energy-intensive industries based on the relatively abundant supply of hydropower are also important. Energy consumption is high, two thirds of it based on hydro and geothermal sources, including practically all electricity. Carbon dioxide (CO_2) emissions amounted to about 8.5 tonnes per capita in 1990, lower than the average of about 12 tonnes for countries of the Organisation for Economic Co-operation and Development (OECD). Two thirds of these emissions are almost equally divided between traditional transport and fishing vessels. Iceland has only about 270,000 inhabitants and a small administration which has to prioritize domestic and international tasks. Climate change is given high priority, and responses have been organized as an interministerial effort since 1991, with various working groups. Iceland has a target of stabilizing its emissions of greenhouse gases (GHGs) in 2000 at the 1990 level. Further developments of the export-oriented energy-intensive industry will be exempted from this target. Continued degradation of vegetation and soil erosion at present constitute the most serious environmental problem in Iceland.

3. The relative importance of greenhouse gas emissions in 1990 based on the Intergovernmental Panel on Climate Change (IPCC) 1994 global warming potentials (GWPs) was as follows: CO_2 67 per cent, CH_4 18 per cent, N_2O 6 per cent and other gases (perfluorocarbons (PFCs) from industrial processes) about 9 per cent. The share of process emissions from industry (CO_2 and PFCs) is particularly high. The team was given revised 1990 figures as well as data for 1990-1995. These are based on the IPCC guidelines and presented in a transparent manner with emphasis on areas where improvement is needed. The situation in the land-use change and forestry sector was not sufficiently clear to determine whether this is a net sink or a source, or to give figures. Only about one per cent of the land is presently covered with forest. Emissions of non-CO_2 gases are relatively uncertain, and the team concluded that the estimate of nitrous oxide is still likely to be revised significantly downwards. The estimates of methane emissions for more recent years than 1990 have less uncertainty thanks to the better knowledge of landfill conditions. The team also noted that Iceland has made efforts to develop a methodology for calculating CO_2 emissions related to the utilization of geothermal sources.

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[1] In accordance with decision 2/CP.1 of the Conference of the Parties, the full draft of this report was communicated to the Government of Iceland, which had no further comments.

4. The Government approved an action plan on climate change in October 1995. The national communication often described planned rather than implemented actions, and the team noted that progress had been made both in terms of the institutional framework and implementation of some concrete measures. This builds on activities carried out over many years, and the team in particular noted the efforts to utilize renewables. The team noted that, because of the relatively high proportion of renewables in the energy supply, many measures applied in other countries to reduce energy use would not have much impact on CO_2 emissions in Iceland. There is still some technical scope for reducing CO_2 emissions from stationary energy use, where special measures are taken to make substitution with electricity possible for industry and fishing vessels in harbours. In transport, there are some initiatives on land-use planning and public transport at the local government level. General carbon taxes are under consideration, and a shift towards taxing the use rather than the purchase of cars is foreseen. A working group on emissions from the fisheries sector was established in September 1996.

5. The Government is preparing a master plan for land use with the primary aim of bringing soil erosion under control. There is a programme to sequester 100,000 tons of carbon annually through revegetation and reforestation, although additional efforts will be needed to fulfil the goal in 2000. Also voluntary activities are important in this sector. The Government intends to reduce the waste stream by 50 per cent, and the waste management practices in the Reykjavik area have already been improved during the present decade. Since late 1996 biogas from the biggest landfill has been collected, a measure which alone is expected to reduce national methane emissions by 10-15 per cent. The team in particular noted the efforts made by the aluminium industry, which has reduced emissions of PFCs by 80 per cent since 1990, and the partial use of waste wood instead of coal in the ferrosilicon industry. An estimate of the overall effects of measures could not be provided.

6. The communication contains projections for all direct and indirect GHGs, except for the land-use change and forestry sector, and the team found the methodologies and assumptions reasonable. The projections had been revised before the team's visit. CO_2 emissions actually grew by 6 per cent between 1990 and 1995, and could grow by 14 per cent by 2000, based on decisions taken and measures implemented, the main factor being transport, including fisheries. Additional industrial developments could further increase this substantially, but such developments would not be counted against the national target as the origin of such emissions is not considered to be "domestic consumption". Methane emissions decreased by 9 per cent and could decrease further mainly as a result of developments in the waste sector. Nitrous oxide will remain a small component of Icelandic emissions. Even if aluminium production increases, PFC emissions are expected to remain significantly lower than in 1990. Hydrofluorocarbon (HFC) emissions could, however, represent 3-4 per cent or more of total GHG emissions in 2000, depending on the speed at which the use of chlorofluorocarbons (CFCs) is phased out in the fishing fleet. With the current measures, emissions of all GHGs could increase by 6 per cent by 2000 without further growth in the energy-intensive industry. Thus, achievement of stabilization would most likely require a rapid and effective implementation of additional measures.

7. The impacts of climate change on Iceland are very uncertain, as the nature of such change is itself uncertain. Even a cooling is not an unlikely possibility. Iceland's economy is very vulnerable to changes in the conditions for the fisheries, which could be brought about by marginal climatic changes. Agriculture is also seen as vulnerable. There are no specific adaptation measures, but the country is adapted to a considerable natural variability. Given its limited resources, Iceland relies heavily on and participates actively in international research and development. Spending for this purpose as a percentage of gross national product (GNP) has been relatively low. The country has a well developed meteorological service and network of monitoring stations.

8. Iceland has not participated in the Global Environment Facility (GEF). Official development assistance in 1994 was about 0.1 per cent of GNP, and there are some bilateral projects relevant to the Convention, in particular on the utilization of geothermal energy. The team also noted the host role and funding of the United Nations programme on geothermal energy. Some efforts have been made on education, training and public awareness, through the media and by making information available for schools. Cooperation with non governmental organisations is also seen as contributing to raising public awareness.